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RESTORING THE DAMAGED PIECES:

Practicing Graduate Service-Learning in Hurricane Harvey–Wrecked Houston

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and Genny Fultz (*Marketing/Strategy*)

STUDENT AUTHOR BIO SKETCHES

Desiree Shannon is a 2018 master of business administration graduate from the Krannert School of Management with a concentration in organizational behavior/human resources. She received her undergraduate degree at Ohio University, earning a BA in psychology and history. Upon graduation she became an AmeriCorps National Service Member, where she advised low-income, first-generation, and minority students throughout Southeastern Ohio. She became passionate about equal access and community development. After AmeriCorps, she enrolled in a master's program to study management at Krannert, and to build her career in community welfare, policy, and nonprofits. In December 2016 she became president of the Management Volunteer Program to provide students with invaluable, high-impact service opportunities.

Genny Fultz is a 2018 master of business administration graduate from the Krannert School of Management concentrating in marketing and strategy. She received her Bachelor of Science in food science and food manufacturing operations from Purdue. After graduation, Genny worked for Bimbo Bakeries, USA, the world's largest baking company, in Operations. During her time there, she gained an appreciation for service to the community and awareness for food insecurity in the United States. She volunteers at the local food bank to help combat food scarcity and joined the Management Volunteer Program as a community outreach board member.

INTRODUCTION

On August 25, 2017, Hurricane Harvey made landfall on the coast of Texas. This historic category 4 hurricane brought unusual rain patterns up to 40 inches of rainfall in less than two days (Metz, n.d.). The devastating effects of Harvey quickly became apparent with over 200,000 homes being destroyed in 300 miles within Texas (Reuters, 2017). Although cost estimates are continually being assessed, the National Oceanic and Atmospheric Administration estimates Harvey damages to be \$130 billion (NOAA, 2018). The National Hurricane Center reports that 68 people died as a direct result of Hurricane Harvey (e.g., winds, flooding), with an additional 35 dying from indirect effects such

as electrocution or inability to access medical care. To make matters worse, nearly 336,000 homes lost electricity, and nearly 40,000 people were displaced and relocated to shelters (Blake & Zelinsky, 2018). There is no doubt that these statistics paint a devastating picture, one that left Texas with months and years of repair.

On a Sunday afternoon in Chicago, we discussed how helpless we felt watching the grief expressed by the survivors and rescuers unfold on the TV. We wanted to give them the clothes off our backs and the food in our cabinets. Then we thought, "Why don't we do something? What's stopping us?" It was there in Millennium Park that we decided we were going to find a group of volunteers to take to Houston. There was one very simple but strong

objective for this project: to provide aid to those who have suffered tremendously because of Hurricane Harvey. The group's goal was to serve, in any way they could, by providing comfort and support to those afflicted.

DESCRIPTION

Everything would not have been made possible without our strong relationship with Bayou City Relief and their partner organization, Send Relief/North American Missions Board (NAMB). Bayou City Relief works within various parts of Houston, Texas. This small organization is an offshoot of a larger organization, Bayou City Fellowship (BCF). The BCF created the relief wing to serve Texas in any way possible. Although they are a Christian organization, they believe adamantly in serving their entire community. The BCF allocates 20% of their annual budget for direct community service needs, and has aided Texas throughout all recovery phases of Hurricane Harvey (Bayou, 2017). Send Relief/NAMB is a Southern Baptist-affiliated organization that brings together volunteers across the country to serve anyone who has been impacted by a natural disaster, in most part to spread their beliefs while serving (Send, n.d.). As a part of a dual effort to serve those affected, both the BCF and Send Relief/NAMB worked together to mobilize volunteers. The BCF was responsible for providing relief locations and volunteer sites, and Send Relief/NAMB provided the equipment, supplies, clientele, and know-how behind the restoration. Clientele came from a range of diverse backgrounds, some Spanish speaking.

The clients assigned to us were minority single parents with children who had lost most of their belongings due to flood damage. Their primary needs were the skills of specialty contractors related to structure, foundation, dangerous material waste, and general construction. The neighborhoods that we visited had already completed an initial stage of debris removal by volunteers immediately following the flood water retreat. Because the water level of these neighborhoods had reached up to 3 feet on the first floor of the two-story houses, and in some places as high as 6 feet, the sheetrock, plaster, and insulation had to be removed down to the studs of each house to roughly a foot above the water level. This included removing everything to the brick exteriors of the buildings.

In our assigned houses, the initial debris removal efforts had not thoroughly removed all the water-logged sheetrock and debris, thereby creating a haven for mold. We were tasked with removing the remaining drywall, insulation, and sheetrock, chipping contaminated and damaged tile from the floors, vacuuming and disposing of debris,

power-washing interiors and exteriors, and mopping with bleach solutions (see Figure 1). After cleaning down to the studs, we used a fungicide sanitation spray to prevent black mold growth. During this labor-intensive work, we wore National Institute of Occupational Safety and Health (NIOSH) approved N95 respirators that provided a minimum of 99.97% filtration efficiency against non-oil-based solid and liquid particles (CDC, 2014). In addition to the respirators we wore hand and eye personal protective equipment (PPE). All our equipment and PPE were generously provided by the Send Relief/NAMB and BCF organizations, which was especially helpful since this was an unanticipated project.

It was the first time a Krannert organization traveled to another state to serve, and for multiple days in a row, as we predominantly serve locally. Going into this experience, we did not know what our assignments or responsibilities would be until we arrived the first morning, when we quickly realized the labor-intensive nature of the work. Once we were on the ground, our assignments were given by the Send Relief/NAMB team each morning. We arrived promptly at 8:00 a.m. and ended most of our days in the afternoons. They assigned us to sites based on client availability and the size of the client's project. Because we were a team of nine, it made sense to send us to sites that required a large team. After the first two days of following the lead of a veteran Send



Figure 1. David removing tile.

Relief/NAMB volunteer, our team was free to lead ourselves at the next sites in the remaining days.

COMMUNITY IMPACT

Our primary objective was to serve those who cannot serve themselves and make an impact. As business students we took service a step beyond tracking service hours, and calculated the return on investment of those service hours. Other methods we tracked to measure our impact include the verbal affirmations our clients expressed as well as the network we established in Houston.

It is safe to say our impact was significant based on the hours we served and their monetary value. Throughout the seven days of service our nine volunteers generated a total of 264 hours of flood repair–related service. While the hours alone tell the story of how we spent our time, they can also depict the monetary value we provided. According to FEMA, in 2016, hurricane and flooded home insurance claims averaged more than \$31,000 dollars in damages (Frank, 2017). These damages translate into high costs of repair because they are associated with a contractor's labor rate. These contractors are necessary for making specialized hurricane repairs involving structure, foundation, mold treatment, and anything related to remodeling, all of which can take many days to complete. The Bureau of Labor Statistics (2016) estimated the average "Foundation, Structure, and Building Exterior Contractor Hourly Wage at \$46.14. Due to the limited availability of 2017 data, we used the Association of General Contractors 2017 estimated wage increase of 3.4% (AGC, 2017) to calculate the annual hourly wage for 2017 as \$47.71 an hour. In addition to this annual percent increase, it is also safe to assume an additional wage increase of more than 30% due to the contractor labor shortage in Texas following Hurricanes Harvey and Irma (Davidson, 2017). This new estimated 2017 hourly wage would then expect to be \$62.02 an hour after taking the 30% into account. Due to these factors we estimated the total average monetary value of our service hours to be \$16,373.65 in contracting services (see Table 1).

In addition to our physical work output, we found ourselves providing our clients assistance through the grieving process. Losing their homes, memories, and chunks of their lives, and exhausting all their existing resources, made our service their last hope in accepting their loss. When people go through traumatic loss such as a natural disaster, they experience the five stages of grief: denial, anger, bargaining, depression, and acceptance (Kübler-Ross, 1969). While everyone fights their way through these stages, they fight at their own pace. What

Table 1. Estimated monetary value of service hours.

Total service hours generated	264
Foundation, structure, and building exterior contractor mean hourly wage (2016)	\$46.14
Average annual contractor wage % increase (2017 projection)	3.4%
Estimated 2017 specialty contractor hourly wage	\$47.71
Wage increase due to Texas contractor labor shortage	30%
Contractor hourly wage after % increase	\$62.02
Total estimated average monetary value (hours x contractor hourly wage after 5 increases)	\$16,373.65

might get one client through the loss caused by Harvey may not be enough to encourage acceptance in another. Despite each client having a different need to process their loss, our service built them the supportive network they needed to remain resilient despite their circumstances. Research shows us that building resilience skills in clients helps promote functional recovery of the grieving process as well as hope, both vital for retaining a positive outlook (Burnham & Hooper, 2012). Our clients expressed their appreciation by the numerous prayers and hugs, and with little resources they felt they could provide. They offered what snacks they had around and bottles of water to satiate our thirst. Before we left, one of the clients asked to take a photo with us, and we were honored to do so (Figure 2). Knowing that we helped aid them in processing the loss of major parts of their homes, by simply providing our volunteer services, made overcoming the challenges we faced in planning the trip worthwhile.

As with any part of a service-learning project, we spent time reflecting on our service experience and what we learned. Our student organization, the Management



Figure 2. Clients and volunteers.

Volunteer Program (MVP), will plan to continue incorporate service-learning experiences and reflect on those in the future. While there is uncertainty as to what these experiences will be, they will be tailored to the passions of the student body.

STUDENT IMPACT

Organizing an out-of-state service trip provided us with a great deal of real-world applicable experience that is helpful to know as students, but also in our future careers. We had the opportunity to build upon several skills including, but not limited to, grant writing, project management, operations, construction management, event organization, team building, and leadership. In planning the logistics, we were exposed to the general structure for taking a team across state lines, securing funding, and managing the information that needed to be communicated as well as building that team. It was critical that all members of the team we found were deeply committed to contributing to those afflicted, and fortunately we were able to create a team that embodied just that. Once we were on the ground we had the chance to put our team and construction management skills to work. With everyone filling the role that both best suited them and was necessary to the restoration, we could stay motivated to complete our projects.

While the trip taught us these valuable skills, we still had room for improvement. In retrospect we could have done a better job of communicating what tools we needed and what tasks we could expect to do. Because this trip was planned in a span of a couple weeks, we only got in touch with our community partner a mere 10 days before we flew out. Even with this contact, they had no

real ability to predict what kind of work we would have had to complete because progress was monitored daily. For next time we would want to know much earlier in the process what kinds of clothes, shoes, and equipment we would need to have. After getting that information, we would want to communicate it with the team so they have adequate time to prepare for the trip.

For most of the students who volunteered on this trip, none had ever tackled home improvement projects or swung a hammer, let alone run a power-washer. Coming from international backgrounds, some of the students were amazed at how houses in the U.S. were built compared to their own homes in countries like India. We all experienced profound awareness at how different our cultures are yet how similarly we can tackle a problem together. Our team developed strong relationships that we might not have ever had the chance to develop, if we had not gone on the trip. We found commonalities and shared laughter and friendship as a team over the course of seven days. Meeting Purdue Alumni in support of our mission, we bonded over new cuisines (e.g., Tex-Mex, which the Indian students adored), and in experiencing the vast diversity of Houston, enabled life-long relationships that we will cherish forever (Figure 3). It's clear to us that we were learning and growing as a group and team. That is not to say we didn't experience intergroup challenges. Our team experienced challenges that strained patience and caused emotions to run high, especially when it came to restroom logistics with a group of nine in a flood-ravaged neighborhood with no working toilets.

Challenges in organizing the service project included managing the multiple commitments of our team members, finding a community partner, the general costs



Figure 3. Purdue Shell alumni networking dinner.

associated with the travel, and, once we arrived in Houston, the scheduling of downtime and building trust with our clientele. Other organizations within the Krannert School of Management had preplanned trips during the fall break. This meant that students either were already previously committed to another trip or were making other plans, conflicting with the impromptu nature of our trip. To address this concern, we were able to work with our students to make reasonable accommodations. Even if they could only serve four of the seven days, we recognized that any support achieved our mission. We simply wanted to provide opportunities for anyone who wanted to contribute. But even with a date set, we needed to locate a community partner. After reaching out to the American Red Cross and Habitat for Humanity to aid in their service efforts, we were referred to their local chapters due to an outpouring of volunteers. We did not settle for working locally, because we wanted to do our part and work on the front lines of the restoration. Desiree connected with Krannert alumnus Alex Colsten of Royal Dutch Shell Group, who had established roots in Houston upon his graduation. After conversation and much preparation, we were then referred to our community partners, Bayou City Relief and Send Relief/NAMB.

To alleviate some of the last-minute travel costs, the students paid for their airline tickets and the Krannert Professional Development Center sponsored our lodging. We also secured a \$1,500 service-learning grant to cover ground transportation and any other travel costs. Once the costs were covered and we arrived in Houston, we set out to address the last barrier of scheduling for downtime. We wanted to get the most out of the trip, but we recognized that not everyone has the same level of stamina, meaning everyone would likely need a day of rest to explore the culture of Houston. Initially we did not plan for this downtime, but once we had completed our first couple days of work, we knew that some time off was essential for maintaining the team's excitement. We worked with our Send Relief/NAMB representative to do a low-impact 2-hour service day to provide everyone with as close to downtime as possible. We also scheduled a Purdue Shell Alumni networking dinner to build relationships and unwind.

Finally, we faced the challenge of communicating with the clients and building enough trust for them to accept our service. Our group experienced significant idle time while we waited for our project leader to find the next assignment or the next client. We were turned away from job sites a few times as the owners decided they no longer needed the volunteers, required translators, or they were not available. Discussing this with our initial job lead, we discovered that victims in the area were hesitant about accepting aid from

the volunteer groups for trust or pride reasons, preferring to either do the job alone or hire a contractor.

In the event this project is replicated, our action plan will be slightly altered to account for prompt location of a community partner and selection of the cause. These steps would have enabled for better preparation and knowledge of what to expect. If in the future there is not necessarily a hurricane that requires relief, we can consider the vast number of natural disasters occur throughout all points of the year across the United States as well as other nonprofits in need of volunteers. The MVP will continue to nurture our relationship with Bayou City Relief, Send Relief/NAMB, and Shell for sustainable community benefit in Houston. Having an established network in Texas will prove valuable in the event we decide to ever return to that area. Also, we have connected with our new alumni and Shell connections on social media to maintain long-term contact. Maintaining these relationships and the numerous other nonprofit relationships we have built along the way has inspired us to continue to volunteer even after we graduate. For Desiree, specifically, this project solidifies her motivation to work in the public sector. Service has tremendous impact, making the work of public sector critical to supporting our country's disadvantaged as well as our gross domestic product or annual economic output (Wu, 2011).

CONCLUSION

Based on our experience, there is a common trend among students where they are driven by competitive academics and rigor rather than experiential service-learning. This is not to say getting high grades or taking challenging classes is not positive, but rather to say that students have less drive to serve in the community as a result. Some of these motivations can be explained by the diverse cultures represented at Purdue; however, they can also be explained by the overall organizational culture. Organizational culture is defined as a set of "shared beliefs and values established by leaders and then communicated and reinforced through various methods" (SHRM, 2018). Organizational culture research shows us that people are more likely to embody service-learning when the culture of their organization supports an environment conducive for service-learning in both its values and actions. Furthermore, if all students are given the collective opportunity to serve together, especially in a university community, students are more likely to make their time available. This is an opportunity for colleges and student organizations to create more community-wide activities that have important stakeholder buy-in, such as from a dean or director. An example of a project could be if the entire Krannert

School of Management hosted a community service day, planned and implemented by diverse planning committee, and ultimately evaluated the students' reflections on the day. Diversity in this example would be faculty, staff, and students of varying backgrounds. This sample event would symbolize action behind the words of the Krannert culture: not simply "valuing" service-learning but practicing it from the top down (Coleman, 2013). Students planning community service events or organizations interested in experiential service-learning will be more successful in their initiatives if they have the actionable support of leadership such as faculty and staff.

The structure of our service-learning project itself can be utilized in the core curriculum of various academic disciplines. Principles we used in Krannert Operations Management and Supply Chain courses, such as idle time and efficiency during the production process, were used in consuming as few BCF resources as possible while still meeting the client's needs. Additional Purdue disciplines such as construction management, which teaches safety, project planning, scheduling, estimation, and other aspects of building construction, could be a good fit for the next service-learning project like ours. The mutual benefits of our project for both the students and the community partner include that the students gain valuable experience that prepares them for full-time work and that the community partner receives valuable labor to accomplish more than they thought possible. By continuing to partner in service-learning projects like ours, Purdue University and community partners can fully exploit the positive network externalities for both the students and the clients in need.

We hope that after reading this article, future service leaders can learn from our challenges, successes, and framework as they plan their own community-based efforts. No project is perfectly implemented from beginning to end, but those imperfections lead to learning and growth. To improve as a student, leader, or organization, it is important to value the imperfections, upsides, and downsides of an experience. At the end of the day, our efforts brought a sense of relief to those affected by Hurricane Harvey, both physically and emotionally, and challenged our preconceived notions in the process. Our general framework can enable other leaders interested in disaster relief restoration to avoid "reinventing the wheel," provide high impact service, and learn from our hurdles in planning their own projects.

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